**IN THE CLAIMS:**

Please **AMEND** claims 2 and 11 as follows.

1. (Withdrawn) A layered Fe-based alloy comprising a base material, which is composed of an Fe-based alloy, and a diffusion layer which is formed by allowing a carbide to diffuse into said base material, the diffusion layer having a hardness higher than that of said base material, wherein:

a thickness of said diffusion layer, which is measured from a base point of a surface of said layered Fe-based alloy, is not less than 0.5 mm.

2. (Currently Amended) A layered Fe-based alloy member, comprising:

a coating disposed on an outer surface of a first portion of the layered Fe-based alloy member, wherein the coating comprises a carbide formed by carbonizing a first element that comprises a property to increase a hardness of the layered Fe-based alloy member at the first portion, and wherein the coating further comprises a thickness of at least 0.5 mm; and

a second element disposed in a second portion of the layered Fe-based alloy member, wherein the ~~material~~ second element comprises an amount that is greater on the outer surface than at an inside portion of the layered Fe-based alloy member,

wherein an amount of the first element is greater at the inside portion than on the outer surface of the layered Fe-based alloy member, and

wherein a hardness of the layered Fe-based alloy member at the first portion is greater at the inside portion than on the outer surface of the layered Fe-based alloy member.

3. (Withdrawn) A layered Fe-based alloy comprising a base material composed of an Fe-based alloy and a diffusion layer formed by allowing a carbide to diffuse into said base material, said diffusion layer having a hardness higher than that of said base material, wherein:

said hardness of said diffusion layer decreases at deeper inside positions, and a thickness of said diffusion layer, which is measured from a base point of a surface of said base material, is not less than 0.5 mm; and

a concentration-varied portion, having a hardness that increases as an amount of an element having a property to increase said hardness of said base material increases from a surface layer portion to an inside portion of said base material, is provided in a part of the base material in which said diffusion layer is absent.

4. (Withdrawn) The layered Fe-based alloy according to claim 1, wherein said carbide is a carbide of Cr, W, Mo, V, Ni, or Mn.

5. (Withdrawn) The layered Fe-based alloy according to claim 4, wherein said carbide has a compositional formula of $M_6C$ or $M_{23}C_6$ provided that M represents a

metal element.

6. (Withdrawn) The layered Fe-based alloy according to claim 1, wherein said carbide is obtained by carbonizing a solid solution of Fe and at least one of Cr, W, Mo, V, Ni, and Mn.

7. (Withdrawn) The layered Fe-based alloy according to claim 6, wherein said carbide has a compositional formula of (Fe, $M)_6C$ or (Fe, $M)_{23}C_6$ provided that M represents a metal element.

8. (Previously Presented) The layered Fe-based alloy member according to claim 2, wherein said second element is C, Si, Cu, Ti, Al, or Mg.

9. (Withdrawn) A method for producing a layered Fe-based alloy comprising a base material composed of an Fe-based alloy and a diffusion layer formed by allowing a carbide to diffuse into said base material, said diffusion layer having a hardness higher than that of said base material, wherein a thickness of said diffusion layer, measured from a base point of a surface of said layered Fe-based alloy, is not less than 0.5 mm, the method comprising the steps of:

applying, to a surface of said Fe-based alloy, a metal powder to increase said hardness; and

heat-treating said Fe-based alloy with said metal powder applied thereto, so that at least carbon contained in said Fe-based alloy and said metal are reacted with each other to form said carbide, wherein said carbide is diffused into said Fe-based alloy.

10. (Withdrawn) The method for producing said layered Fe-based alloy according to claim 9, wherein Cr, W, Mo, V, Ni, or Mn is used as said metal.

11. (Currently Amended) A method for producing a layered Fe-based alloy member having an increased hardness at a first portion of the member from an outer surface to an inside portion thereof, wherein the member comprises a coating disposed on an outer surface of the first portion of the member, wherein said coating comprises a thickness of at least 0.5 mm and a carbide formed by carbonizing a first element that comprises a property for increasing the hardness of the Fe-based alloy member, the member further comprising a second element, other than said first element, disposed in a second portion of the member, wherein said second element comprises an amount that is greater on the outer surface than at the inside portion of the member, and wherein an amount of said first element increases from said outer surface to said inside portion, the method, comprising:

applying, to a surface of said Fe-based alloy member at the first portion, a powder comprising a substance that comprises said first element; and

heat-treating said Fe-based alloy member with said powder applied thereto, so that

said first element is diffused to said outer surface of the member at the first portion, wherein said first element reacts with carbon existing in said outer surface of said Fe-based alloy member to form said carbide.

12. (Withdrawn) A method for producing a layered Fe-based alloy, comprising the steps of:

applying, to a surface of an Fe-based alloy, a powder made up of a substance containing a first element which increases hardness, while applying, to a part of the Fe-based alloy other than where said first element was applied, a powder made up of a substance containing a second element, wherein the second element is different from said first element and is contained in said Fe-based alloy, or applying, to said surface of said Fe-based alloy, said powder made up of said substance containing said second element, while applying said substance containing said first element to a part of the Fe-based alloy other than where said second element was applied;

applying heat treatment to said Fe-based alloy after applying said powders thereto, each powder containing said first element or said second element respectively, so that a diffusion layer, having a thickness of not less than 0.5 mm and a hardness higher than that of a base material, is provided at said part to which said powder of said substance containing said first element was applied, while a concentration-varied portion, in which a hardness thereof is increased as an amount of an element having a property to increase said hardness of said base material is increased from a surface layer portion to an inside

portion of said base material, is provided at said part to which said powder of said substance containing said second element was applied,

wherein said diffusion layer is provided such that said first element is diffused into said Fe-based alloy, thereby diffusing said carbide into the Fe-based alloy by causing a reaction with carbon of said Fe-based alloy, and

wherein said concentration-varied portion is provided such that said first element of said Fe-based alloy is diffused from said inside portion to said surface layer portion of said Fe-based alloy, and carbon, which exists in said surface layer portion, reacts with said first element to form a carbide-containing coating, thereby discharging said first element from said base material.

13. (Previously Presented) The method for producing said layered Fe-based alloy member according to claim 11, wherein Cr, W, Mo, V, Ni, or Mn is used as said first element.

14. (Previously Presented) The method for producing said layered Fe-based alloy member according to claim 11, wherein C, Si, Cu, Ti, Al, or Mg is used as said second element.

15. (Withdrawn) The method for producing said layered Fe-based alloy according to claim 12, further comprising a step of removing said coating.

16. (Previously Presented) The layered Fe-based alloy member according to claim 2, wherein said carbide is a carbide of Cr, W, Mo, V, Ni, or Mn.

17. (Previously Presented) The layered Fe-based alloy member according to claim 16, wherein said carbide comprises a compositional formula of $M_6C$ or $M_{23}C_6$ wherein M represents a metal element.

18. (Previously Presented) The layered Fe-based alloy member according to claim 2, wherein said carbide is obtained by carbonizing a solid solution of Fe and at least one of Cr, W, Mo, V, Ni, and Mn.

19. (Previously Presented) The layered Fe-based alloy member according to claim 18, wherein said carbide comprises a compositional formula of $(Fe, M)_6C$ or $(Fe, M)_{23}C_6$ wherein M represents a metal element.

20. (Withdrawn) The layered Fe-based alloy according to claim 3, wherein said carbide is a carbide of Cr, W, Mo, V, Ni, or Mn.

21. (Withdrawn) The layered Fe-based alloy according to claim 20, wherein said carbide has a compositional formula of $M_6C$ or $M_{23}C_6$ provided that M represents a metal element.

22. (Withdrawn) The layered Fe-based alloy according to claim 3, wherein said carbide is obtained by carbonizing a solid solution of Fe and at least one of Cr, W, Mo, V, Ni, and Mn.

23. (Withdrawn) The layered Fe-based alloy according to claim 22, wherein said carbide has a compositional formula of $(Fe, M)_6C$ or $(Fe, M)_{23}C_6$ provided that M represents a metal element.

24. (Withdrawn) The method for producing said layered Fe-based alloy according to claim 12, wherein Cr, W, Mo, V, Ni, or Mn is used as said first element.

25. (Withdrawn) The method for producing said layered Fe-based alloy according to claim 12, wherein C, Si, Cu, Ti, A1, or Mg is used as said second element.